

# THE BIRDS OF BOMBAY AND SALSETTE.

BY

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PART IV.

(With 2 plates).

(Continued from p. 688 of Vol. xxxix).

## **The Common Weaver-Bird or Baya : *Ploceus philippinus philippinus* (Linn.).**

Local name : *Sön-chiri*.

*Field identification* : Size of the House-Sparrow. In non-breeding plumage both sexes very like the female of that bird, but with a thicker bill and somewhat shorter tail. In the breeding season the male acquires a golden-yellow head and breast, and the back is suffused with the same colour. The throat and sides of the head are dark brown. Flocks about rice cultivation.

Specimens : *B.N.H.S.* : ♂ 21-3-24 Chembūr (S.A.); ♀ 14-1-13 Santa Cruz (N. B. Kinnear); *St. Xavier's College* : 63 ♀, 64 ♂, 65 ♂ 3-9-33 Jogēshwari; 186 ♂ 19-3-34 Gōrēgāon; 205 ♀, 206 ♂? November '34 (H.A.).

Apparently a local migrant to some extent, as it becomes quite scarce in Salsette during January and February. Common on the open outskirts of the city, in the suburbs and throughout the island of Salsette. In the dry season flocks may usually be met with gleanng paddy in stubble fields. At this period, however, they split up into smaller or larger parties and spread far and wide over the countryside. They are also less noisy, and therefore not so conspicuous as when nesting. They do a certain amount of damage to ripening paddy crops. *Erythrina* flowers are largely resorted to in season both for the nectar and for the newly forming pods. Lantana berries are also eaten. At night, large numbers foregather to roost among tall grass patches and the mangroves by our tidal creeks, such as at Mahūl and Gōdhbunder. Here, hundreds of birds may be observed any evening arriving from all quarters. They also roost amongst the reeds and bulrushes round the margin of Powāi Lake.

*Breeding* : Many males have already acquired breeding plumage by the middle of May, but the nesting is not in full swing until the monsoon is well set. During the rains nest colonies are to be seen dotted about on bēer and babool trees and palmyra and date palms all over Salsette. By the middle of October all the chicks have left the nests.

The retort-shaped, woven, fibre nests are too well known to need description. The building work is done almost entirely by the males. In the earlier stages of a building colony the females are absent. They arrive only after some of the nests are half built, and take possession of these if approved. Thereafter the hen helps the cock in finishing off the interior. When the nest is ready, the eggs laid and the hen brooding, the cock commences to build another nest on a nearby twig which, in due course, may be appropriated by a second roving or prospecting female. In this way some cocks have three or more nests with as many wives, acquired one at a time. The usual number of eggs in a nest in Salsette is 2 to 4. They are pure white in colour.

## **[The Black-throated Weaver-Bird : *Ploceus benghalensis* (Linn.).**

We have not come across this species in our area, but Wenden (*N. & E.*, ii, 120) records finding 8 or 10 nests, some containing eggs, at Bhāndūp on 28 August somewhere about 1880 (?).]

## **[The Striated Weaver-Bird : *Ploceus manyar* ssp.**

Not met with by us, but there is a specimen listed in the Bombay Natural History Society's Card Catalogue as from Bombay. It is doubtful however, if this was a wild bird or one procured in the local bird market.]

**The White-backed Munia : *Uroloncha striata striata* (Linn.).**

*Field identification* : Smaller than the House-Sparrow. A small black-and-white finch with a heavy conical bill and wedge-shaped tail. Sexes alike. Pairs or small flocks in scrub country, about roadside hedges, etc.—often feeding on the ground.

No specimen. Noted : *Salsette* : Chembūr, An dhēri, Borivli.

Resident. Not common in Salsette though pairs and small flocks are occasionally seen. We have observed them feeding on grass seeds both on the ground and from off the stems. They are also very partial to bamboo seeds whenever available.

*Breeding* : In Salsette and across the Harbour—at Kihim and Alibāg, where it is common—we have found nests in various stages of construction or with eggs and young chiefly between March and November. August and September, however, appear to be the months when most eggs are laid. The nest is an untidy globular structure with entrance-hole on one side, occasionally in the form of a short tube. It is made of fine soft feathery grass, intermixed on occasion with a little coarse grass and even coconut fibre. It is placed between 5 and 10 feet up in a small bē, lime or similar tree or bush, in scrub country and gardens. We have frequently observed four birds working on a single nest, but whether more than one female uses it for laying in at a time is not known. The nests are certainly used as dormitories by the entire family long after the young have flown. The eggs, pure white in colour with a pinkish tinge when fresh, number four to seven. Both parents roost within the nest at night even before the first egg is laid, and continue to do so throughout the incubation period. Brooding seems to commence in earnest only after the laying of the last egg. In one clutch of 5 eggs the incubation period was ascertained to be 13-14 days from the last egg (or 19 from the first). Both parents feed the young, apparently largely by regurgitation. The nests become foul with the excreta of the young, which are not removed.

**The White-throated Munia : *Uroloncha malabarica* (Linn.).**

*Field identification* : Size same as the last. A plain earthy-brown, thick-billed little bird with a pointed black tail, whitish underparts and a white rump. Flocks feeding by hedges and along cart tracks in open scrub country, gardens etc.

Specimens : *B.N.H.S.* : ♂ 5-7-25 Borivli (S.A.); *St. X. C.* : 87 ♂, 88 ♀ 25-9-33 Jūhū (H.A.).

Resident. Not uncommon in our area but perhaps more plentiful across the harbour in the Kolāba District. It prefers open sparsely scrubbed country and babool jungle. H.A. has noted it as common on the Reclamation at Church Gate (1933-35) and Br. Navarro observed it making abortive attempts at nest-building there in September.

*Breeding* : We have records of nests from Borivli, Chembūr and elsewhere in Salsette, and from Kihim (across the Harbour, in Alibāg Talūka) for every month in the year except December, January and February. This Munia habitually utilises disused Baya nests for laying purposes. Indeed it may almost invariably be seen haunting Baya nest-colonies even while the legitimate owners are still in occupation, entering the hanging tubes as opportunity offers. Although so far we have never found its eggs in occupied Baya nests but only in old and deserted ones, it is quite conceivable from its behaviour that it may in course of time develop a habit of parasitism on the Baya. When constructed by the bird itself, the nest is an untidy globular affair with a lateral entrance hole, similar to the Striated Munia's but with fine twigs on the exterior and often lined with feathers. Large feathers such as those of egrets and rollers are often used. The nest is placed in a babool, bē or other thorny bush usually at heights of 6-12 feet. We have found, as a rule, 4-7 white unmarked eggs in a clutch. Both when self-built and when appropriated from a Baya, the nests are used as dormitories when the breeding season is over, as many as 6 or 8 birds—probably parents and their brood—crowding into a single nest to roost.

**The Spotted Munia : *Uroloncha punctulata lineoventer* (Hodgson).**

*Field identification* : Shape and size about the same as the last. In breeding plumage head and upper parts chocolate-brown. Underneath white with black speckles. In non-breeding plumage more or less plain brown. Pairs, parties

or flocks, according to season, feeding on ground in open scrub-and-grass country, and by cultivation.

Specimens: *B.N.H.S.*: ♂ 7-2-24, ♀ 8-3-24 Pāli Hill, Bandra (S.A.); ♂ 1-12-12 Santa Cruz, ♀ 4-12-09 An dhēri (N. B. Kinnear); *St. X. C.*: 62 ♂ 3-11-33 Jogēshwari; 73 ♀, 74 ♀, 75 ♂ juv., 76 ♂ 12-11-33 An dhēri (H.A.).

Resident. Common. Often met with in large flocks of 75-100 birds or more. In the cold weather these flocks comprise largely of individuals in the plain brown plumage. A conspicuous change is noticeable by the first week of March when a large number are in the chestnut and spotted phase. This increases gradually until by July or August, when the breeding season is at its height, the majority of birds (if not all) are in the speckled plumage. The flocks have of course then mostly broken up into pairs. When a flock is disturbed feeding on the ground, the birds fly up into trees and bushes uttering feeble chirrups.

*Breeding*: The season in our area is a prolonged one lasting from about June to December. The nest is the usual globular structure of a Munia, made of grass blades, and is placed in the same sort of situations as that of the two previous species. We have, however, seen several nests in Salsette built at the bases of palmyra leaves, 40 ft. or more up. A normal clutch consists of 4-6 white eggs.

#### The Indian Red Munia: *Amandava amandava* (Linn.).

*Field identification*: Slightly smaller than the foregoing, with a square (not pointed) tail. In breeding plumage the male is a beautiful deep crimson with white spots on the breast and flanks. Female brownish with a red bill and crimson rump. The male in non-breeding dress resembles the female. Flocks about tall grassland and amongst reeds.

Specimens not collected.

Status? This Munia is rare in Salsette. We have come across it only on three occasions and it is possible that these were all escaped cage birds. The Red Munia or 'Waxbill' is a favourite with fanciers and large numbers from our country are always for sale in the Crawford Market.

*Breeding*: Aitken (*C.B.B.*, p. 138) saw a pair making a nest at Tārdeo. According to Betham (*J.B.N.H.S.*, xii, 78) it breeds in the neighbourhood of Poona at the beginning of September.

#### The Common Indian, or Hodgson's Rose-Finch: *Carpodacus erythrinus roseatus* (Blyth).

*Field identification*: Size about that of the House-Sparrow, with thicker bill and slightly forked tail, the last being a conspicuous feature. The male in full plumage has a beautiful crimson-pink head, breast, back and shoulders; the female is brown with an olive tinge. Flocks in flowering trees, Lantana bushes and sometimes on the ground.

Specimens: *B.N.H.S.*: ♀ 8-12-25 Gödhbunder, ♂ 3-3-29 Tūsi Lake (S.A.); ♂ 1-12-23 An dhēri (S. H. Prater); *St. X. C.*: 187 ♂ 21-3-34 Borivli (H.A.).

Winter visitor and passage migrant. Fairly common. Flocks usually arrive in Salsette about mid-November and some individuals stay over till the first week of April. The birds are much more in evidence about March when their numbers are augmented by the return passage from the south. While with us, we have observed Rose-Finches feeding largely on Lantana berries and on nectar from the flowers of *Calycopteris floribunda*, *Erythrina indica* and various other species. Large quantities of *Erythrina* pollen were found on the forehead and chin of specimens shot off the flowers, and the birds doubtless do service in cross-pollination. The call note is a pleasant interrogative whistling *tooee?*

#### The Yellow-throated Sparrow: *Gymnorhis xanthocollis xanthocollis* (Burton).

*Field identification*: Size that of the House-Sparrow. Earthy-brown above, whitish below. The male has a lemon-yellow patch on the throat, two whitish bars on the closed wing and a bright chestnut patch near the shoulder. The female lacks the yellow throat-patch, and the chestnut on her shoulders is duller. Slightly but markedly forked tail. Pairs and flocks, according to season, by village cultivation, and in open deciduous forest.

Specimens: *B.N.H.S.*: ♂ 21-3-24 Chembūr; ♀ 6-4-24 Sion Causeway (S.A.).

Noted: Elephanta Island, Thāna, Borivli etc. Common on the mainland—across the harbour—at Kihim, Alibāg etc.

The Yellow-throated Sparrow is a common breeding species in our area. It is a local migrant; during the monsoon months practically none are to be seen, but its numbers increase again after about the first week of October. Parties of from 8 to 20 birds may be seen gleaning in harvested paddy-fields and in the vicinity of threshing floors in villages. Along with numerous other bird species, they invariably feed on the nectar from *Bombax* and *Erythrina* flowers in season. During the heat of the day flocks collect in leafy trees and spend the hours in noisy chirping. The call-notes are very like those of the House-Sparrow, somewhat pleasanter.

**Breeding:** The nesting season lasts from March to May. The nest is a pad of hair and fibres lined with feathers, and placed inside natural hollows in trees, barbet- and woodpecker-holes, pipes, old disused street lamps, etc. Two to four eggs—in appearance very like those of the House-Sparrow—is what we have found to comprise a normal clutch. Both parents share in feeding the young.

**The Common House-Sparrow:** *Passer domesticus indicus* Jardine & Selby.

Local name: *Chiri*.

**Field identification:** Too well-known to everybody to need description. A commensal of man.

Specimens: *B.N.H.S.*: ♂ 12-6-07 Worli, Bombay (Mr. Strong); *St. X. C.*: 192 ♂, 193 ♀ 4-4-34 Bombay City (H.A.).

Resident. Abundant alike in city and suburbs, as well as in villages farther afield, and by human habitations of every description. Often feeding in large flocks on the maidans and the Reclamation area. There is a recent record of a sparrow being struck in mid-air and killed by a cricket ball while a match was in progress on the grounds of the Islam Gymkhana! Large numbers collect every evening at sunset to roost in favourite trees and much noise and bickering prevails before the birds finally retire, usually well past dusk. It is difficult to conjecture what determines the choice of a particular roost out of several apparently equally suitable trees. How long the same tree continues to serve as a roost we do not know, but we know one that had been in occupation for three years at least. The Green Whip Snake (*Dryophis mycterizans*) commonly preys upon House-Sparrows in the suburbs, and crows and cats do great destruction amongst their fledglings everywhere. Albinism appears to be a not uncommon disease among the sparrows in Bombay. Several cases of complete or partial albinism have been reported from time to time.

**Breeding:** Sparrows breed practically throughout the year and make themselves a thorough nuisance in more ways than one to the inmates of the dwellings they select. Holes in the masonry of buildings and wells are most commonly used. Every conceivable site, such as the angle behind a picture hung on a wall and the globes of lamps, is appropriated. The inverted glass bell-jars, so commonly seen in mosques and fire-temple, offer irresistible opportunities for nesting. Gargoyles and drain pipes are everywhere much patronised. We have observed a bird trying to build up in a papaya tree and another on an *Erythrina*. The nest is an untidy collection of grass and feathers, and during its construction a formidable accumulation of rubbish litters the ground below. The usual clutch here consists of 3-5 eggs, greenish-white in ground colour, blotched and speckled with greyish-brown.

**The Black-headed Bunting:** *Emberiza melanocephala* Scopoli.

**Field identification:** Slightly larger than the House-Sparrow with a longer and noticeably forked tail. Head black. Bright yellow underparts and much of this colour in the rest of the plumage also. In the female the head appears rufous-brown and the yellow in her plumage is merely a suffusion of greyish-olive. Flocks, in and about cultivation.

Specimens: *B.N.H.S.*: ♀ 30-12-07 Andhəri; ♂ 9-11-12 Santa Cruz (Kinnear).

Winter visitor. This Bunting is very common in the cold weather in Deccan and small numbers may also be met with in our area. Aitken (*C.B.B.*, p. 144) mentions it as a winter visitor to Bombay. We have not come across it actually within Salsette, but in the Kolāba District across the harbour, flocks are not uncommon from the beginning of November up to

March. The birds usually feed on hedged-in cross-country cart tracks, and in fields in the vicinity of villages.

There are no records of the Red-headed Bunting (*Emberiza icterica*) in Salsette, but it is not unlikely to occur here, as in the Deccan, in mixed flocks with the Black-headed Bunting.

[**The Crested Bunting** : *Melophus lathami subcristatus* (Sykes).

There is a specimen of this Bunting in the B.N.H.S. collection from Kalyan. We have come across it at Vāsind. There is no record in Salsette.]

[**The Crag Martin** : *Riparia rupestris* (Scop.).

H.A. has observed this Crag Martin at Karnāla and Panvël (Kolāba District) on the adjacent mainland in the cold weather (16-2-36), and it is therefore quite probable that it occurs in Salsette also at that season. EHA (*C.B.B.*, p. 41) thought he saw it about Malabar Hill—quite a likely spot in Bombay City. As compared with the next species, which is our common crag martin in this area, it is whitish on the underparts which contrast with the blackish undertail coverts in overhead flight. It is also slightly paler above and larger than the Dusky Crag Martin.]

**The Dusky Crag Martin** : *Riparia concolor* (Sykes).

*Field identification* : Somewhat smaller than the House-Sparrow. A uniformly sooty-brown bird with short square tail and swallow-like wings and flight. Usually seen about caves and rock-scarps, and in company with swallows, hawking winged insects.

*Specimens* : *B.N.H.S.* : ♂? 2-3-24 Elephanta Island (S.A.); *St. X. C.* : 231 ♂ Bombay (H.A.).

*Resident*. Not uncommon in Bombay City, the suburbs, and in Salsette generally. In the city it keeps to large and old buildings such as the High Court and the University; farther afield caves—as at Kanhēri, Jogēshwari and Elephanta—and rocky cliffs, ruined forts and buildings are favourite resorts.

*Breeding* : The nesting season is apparently much prolonged. We have noted nests in various stages of construction or with eggs or young in February, March, April, July, August, October and November. The birds are probably double brooded. H.A. has found them breeding in the city in July, but observes that if the nest is destroyed the birds persist in rebuilding or laying again till they succeed, sometimes as late as October.

The nest is a deepish half saucer of mud pellets collected while damp, at a rain puddle or the like. It is stuck to the perpendicular cliff or wall about 2 inches below the ceiling or rock projection. It is lined with tow or feathers as a rule. The normal clutch consists of 3 eggs. These are white in ground colour, spotted and blotched with purplish-brown. Both sexes share in building the nest, incubating the eggs and feeding the young.

An experiment in the ringing of nesting Crag Martins was tried by H.A. A pair had nested successfully in a ground-floor verandah of St. Xavier's College in the 1932 season. In the following year a pair (then presumed to be the same) built in the verandah of the first floor. They succeeded in raising two young from the second laying, the first clutch having been removed. The parents and young were ringed at the nest at night. In the 1934 season a pair took possession of the identical site, one of which was a ringed bird—obviously one of the four. At the end of the breeding season—during the college vacation—the ringed bird was accidentally destroyed and unfortunately the ring was not read. In the year following a ringless pair took possession of the site. There were no other nests here besides this one in any season. All this shows that where the same site is used year after year, it is not necessarily by the same birds.

**The Eastern Swallow** : *Hirundo rustica gutturalis* Scop.

*Field identification* : Smaller than the House-Sparrow. Head and throat chestnut. Upper plumage glossy blue-black with a band of the same colour across breast. Underparts pale. Tail deeply forked—the conventional 'swallow tail'. Gregariously, on telegraph wires, etc. Hawking insects on the wing, especially by water.

Specimens: *B.N.H.S.*: ♂? 8-4-24 Mud Flats, Sion Causeway (S.A.); ♂? 16-12-12 Tūlsi Lake (Kinnear); *St. X. C.*: 159 ♀ 9-10-33 Powāi; 184 ♂ 19-3-34 Jūhū (H.A.).

Winter visitor. Fairly common. Arriving in October in flocks, often quite large, which take up positions over long stretches of telegraph wires here and there. By the middle of April practically all birds have departed. All our specimens belong to this race, but the one from Tūlsi Lake appears to be intermediate between this and *rustica*. *Gutturalis* is therefore evidently the race that visits Salsette and not *rustica* as should be the case according to the distribution given in the *Fauna*, vol. iii, pp. 241-2.

**The Indian Wire-tailed Swallow**: *Hirundo smithii filifera* Stephens.

*Field identification*: Size as the foregoing. Glossy steel-blue above white below, with chestnut crown. Two long wires in tail which in the female are shorter. May be differentiated on the wing from other swallows by the pure white underparts and the presence of tail-wires. Small flocks, often in association with other swallows, on telegraph wires, etc. or hawking winged insects usually near water.

Specimens: *B.N.H.S.*: ♂ ♀ 12-12-23 Andhēri (S. H. Prater).

Noted: Mud Flats—Sion Causeway, Gōdhbunder.

Resident? Sparingly distributed throughout North Konkan, being everywhere far less abundant than it is in the Deccan.

*Breeding*: We have no record of nests in Bombay or Salsette, but on 5-5-35 one was observed under the old pier at Dharamtar Ferry (Kolāba District) which contained young. The nest is a half-cup of mud pellets stuck to the wall about 2 inches below the ceiling or an overhang. It is not unlike that of the Dusky Crag Martin. It is built under bridges and culverts, on cliffs near water, and occasionally in buildings. There is usually a lining of grass and feathers.

The Wire-tailed Swallow breeds in some numbers at Khandala (ca. 2,000 ft.—Western Ghāts) in April and May.

**[The Indian Cliff Swallow**: *Hirundo fluvicola* Blyth.

*Field identification*: Much smaller than the other swallows with a short square tail and black-streaked white underparts. Gregarious; usually large numbers.

Not met with by us, but *EHA* (*C.B.B.*, p. 41) records seeing it in Bombay. It is common in the neighbourhood of Poona and Betham (*J.B.N.H.S.*, xii, 78) found nests there built under arches of a low bridge, 4 or 5 feet above water level.]

**Sykes's Striated Swallow**: *Hirundo daurica erythrogygia* Sykes.

*Field identification*: Size about that of the House-Sparrow. Upper parts deep glossy blue except for the chestnut half collar on nape and the chestnut rump. Below pale rufous with fine blackish streaks. Tail deeply forked. Gregarious, about old mosques and buildings and on telegraph wires.

Specimens: *B.N.H.S.*: ♂? 8-4-24 Mud Flats, Sion Causeway (S.A.); *St. X. C.*: 58 ♂? juv. 21-8-33 Gōrēgāon (H.A.).

Resident (?) in small numbers. During the cold weather large congregations are seen closely packed on telegraph wires in the early mornings, often covering several hundred yards of the line. Most of these birds are migrants, however, and possibly belong to the race *nepalensis*. Unfortunately we have no specimens collected from such flocks.

*Breeding*: We have no record from Salsette. For four years in succession we found a nest with eggs on the ceiling of a small rock-cave in the hills near Kihim (Alibāg Talūka) between 15 and 31 May. The nest is retort-shaped, attached to the ceilings of domes, caves, etc. with an entrance passage about 6 inches long. It is made of mud-pellets, and the egg-chamber is lined with grass and feathers. The normal clutch is of 4 eggs, pure white in colour.

**The Indian White Wagtail**: *Motacilla alba dukhunensis* Sykes.

*Field identification*: Size about that of the House-Sparrow, slimmer, with a slender bill and a much longer tail which is constantly wagged up and down, and longer legs. General colour grey above, white below with a black

ape and bib. Ear coverts *white* at all seasons. Singly or small scattered parties, running about on lawns, maidans and open spaces, picking up insects.

Specimens: *B.N.H.S.*: ♂? 10-2-24, ♂? 16-2-24 Pāli Hill, Bandra (S.A.); *St. X. C.*: 151 ♂ 27-10-33 Jūhū (H.A.).

Winter visitor. Common. The earliest record we have for Salsette is 2 October; the latest 8 April. During the cold weather months the birds may invariably be seen on all our maidans as well as on the grounds of the Willingdon Sports Club and the Race Course at Mahaluxmi, the various Gymkhanas and the Reclamation along Back Bay.

When the inward migration (autumn) is in full swing, the fresh arrivals may frequently be seen 'swarming' in certain localities of the city and suburbs for a day or two, roosting for the night in large numbers among the roadside trees. The majority of birds pass on subsequently, but the remainder disperse over the countryside to spend the winter in our midst. At the commencement of the hot weather, March-April, there are similar waves of passage migrants from the south.

**The Masked Wagtail:** *Motacilla alba personata* Gould.

*Field identification:* Similar to the above, but with the ear-coverts *black* at all seasons.

Specimens: *B.N.H.S.*: ♂ 29-11-23 An dhēri (S. H. Prater).

Winter visitor. Much less common than the White Wagtail and, except for the ear-coverts, difficult to distinguish from it in the field.

**[The Large Pied Wagtail:** *Motacilla maderaspatensis* Gmelin.

*Field identification:* Larger than the foregoing species—about the size of the Bulbul. Jet black above and on breast, white below, with conspicuous white stripes above the eyes and a broad white patch on the wings. General colour scheme that of the Magpie-Robin. Pairs by rocky streams and near water.

We have not come across this Wagtail in Salsette, neither have we seen any specimens hence. EHA (*C.B.B.*, p. 114) says 'not often seen in Bombay' which would imply that he had seen it occasionally.

We have noted it at Tānsa Lake, and at Rōha, Mahād, Panvāl and elsewhere in the Kolāba District on the mainland opposite.

*Breeding:* The nearest record we have is from Khandāla (ca 2,000 ft.—Western Ghāts) where Brother Navarro took a c/3 in October 1935.]

**The Indian Blue-headed Wagtail:** *Motacilla flava beema* (Sykes).

*Field identification:* Size same as the White Wagtail. Differentiated only in summer plumage from the Grey-headed Wagtail principally by its paler greyish-blue head. Singly or scattered parties, on the wet grassy margins of tanks etc.

Specimen: *St. X. C.*: 78 ♂ 12-9-33 An dhēri (H.A.).

Winter visitor, arriving early.

**The Grey-headed Wagtail:** *Motacilla flava thunbergi* Billberg.

*Field identification:* Size as above. In summer plumage distinguishable from the next species by the dark blue-grey head and bright yellow underparts, with no black on throat or breast. Usually several, widely separated, on grassy water-logged ground on the margin of tanks etc.

Specimens: *B.N.H.S.*: ♀ 11-3-24 Pāli Hill, Bandra (S.A.); *St. X. C.*: 115 ♂? 10-10-33 Jūhū (H.A.).

Winter visitor. Fairly common. Earliest date ?; latest 4 May, '34 (Powāl Lake).

**The Grey Wagtail:** *Motacilla cinerea caspica* S. G. Gmelin.

*Field identification:* Size as above. Grey above—with greenish-yellow rump—pale sulphur-yellow below, brighter on abdomen and under the tail. Whitish eyebrows. In summer plumage, just before the birds leave us, chin, throat and upper breast black in male, mottled in female. Almost invariably singly, on damp ground or near streamlets etc.

Specimens: *B.N.H.S.*: ♂? 5-2-24 Pāli Hill, Bandra; ♂? 12-10-24 Khār; ♂ 17-3-24 Tūlsi Lake (S.A.); *St. X. C.*: 96 ♂? 28-9-33 Borivli (H.A.).

Winter visitor. Fairly common. Earliest date 28 September; latest 12 April.





**The Indian Pipit** : *Anthus rufulus rufulus* Vieillot.

Specimens : o? 17-3-24; ♂ 2-4-24 Pāli Hill, Bandra; ♂ 15-6-25, ♂ 21-6-25 Trombay Hill at ca. 1,000 ft.; ♂ 10-11-27 Mud Flats, Sion Causeway (S.A.); ♀ 20-1-13, ♂ 12-11-12, ♂ 20-2-13 Santa Cruz (Kinneer); oo? 12-12-99, 14-12-99 Esplanade, Bombay (J. W. Mason); St. X. C. : 208 ♀ -12-34 An dhēri (H.A.).

Resident. Common. Seen in open fallow land with short grass, stones, etc. *Breeding* : On 15 April (1931) a nest was located on the coarse grass land, inundated during the monsoon but now hard and pitted, adjoining the Santa Cruz Match Works, opposite the Jūhū aerodrome. It was a pad of rootlets and hair placed in an old hoof-print of cattle. It contained 3 chicks about a week old.

**The Eastern Tawny Pipit** : *Anthus campestris griseus* Nicoll.

Specimens : St. X. C. : 14 o? (worn juvenile plumage) 14-10-32 'Salsette'; 18 ♂ 13-1-33, 106 ♀ 13-11-33, 199 ♀ 27-9-34, 226 ♂ 13-11-35 An dhēri (H.A.).

**Blyth's Pipit** : *Anthus campestris thermophilus* (Jerdon).

Specimens : St. X. C. : 155 ♀ 31-10-33 Jūhū (H.A.).

Both these races of the Tawny Pipit visit our area during the winter. *Griseus* appears to be by far the commoner. H.A. finds that it is possible to differentiate Tawny Pipits from the Indian Pipit in the field by the brighter coloured legs and more 'nasal' notes of the former.

**The Small Indian Skylark** : *Alauda gulgula gulgula* Franklin.

*Field identification* : Somewhat smaller than the House-Sparrow but in general appearance not unlike the female of that bird. Rather squat and with a shorter tail. Pairs or small parties, about the tidal mud flats, in the rank grass patches bordering salt pans, and in the surrounding fields. Males soaring, 'hovering' and singing.

Specimens : B.N.H.S. : ♂ 10-11-27 Mud Flats, Sion Causeway (S.A.); ♀ 7-4-24 An dhēri (S. H. Prater); St. X. C. : 43 o, 198 o, 203 o Salsette (H.A.).

Resident. Common. It is plentiful in short grass near the Golf Course at An dhēri.

*Breeding* : On 11 April (1934) H.A. flushed a bird off a nest with c/2, slightly set, at An dhēri. The nest was cup-shaped, made of grass and buttressed with pieces of thick grass stems. It was placed in the shelter of a grass tussock. On 26 April he noted flying young, and has a record of a bird feeding fledged young out of nest on 30 September (1935) on the Churchgate Reclamation. On 10 June (1930) S.A. observed an adult feeding a full-fledged young one, about 3 weeks old, in among cut paddy fields. The season, therefore, appears to be a prolonged one in our area, April to October.

**The Short-toed Lark** : *Calandrella brachydactyla dukhunensis* Sykes.

*Field identification* : Somewhat smaller than the House-Sparrow and not unlike the Skylark to look at except that it is more whitish underneath. Large flocks in open country, about mud flats and fallow fields.

Specimens : St. X. C. : 106 ♂, 107 ♂, 108 ♂, 109 ♂, 110 ♀, 111 ♀, 8-10-33, 105 ♂ 10-11-33 An dhēri (H.A.).

Winter visitor. Fairly abundant in Salsette and on the mainland across the harbour chiefly between November and January. The flocks keep to open, stony, scraggy grass-covered country, tidal mudflats and stubble fields. Occasional chirps are uttered in flight. They drink regularly in the mornings and have favourite watering places at which enormous numbers foregather for the purpose.

**The Malabar Crested Lark** : *Galerida malabarica* (Scop.).

*Field identification* : Size about that of the House-Sparrow. General appearance above, streaked brown somewhat like the female of that bird. Breast streaked black. Small parties or scattered flocks on the dry open ground about tidal mudflats and creeks, and on the scraggy grass-covered hills as at Trombay.

Specimens : B.N.H.S. : ♂ 22-3-24 Gōdhbunḍer, o? 6-4-24 Sion Causeway, o? juv. 15-6-25 Trombay Hill at ca. 800 ft. (S.A.); ♂ 30-12-23 An dhēri

(Prater); ♀ 5-11-12, ♀ 18-1-13, ♂ 6-4-13 Santa Cruz (Kinneer); *St. X. C.*: 56 ♂, 57 ♀ 21-8-33 Andhēri, 232 ♀, 235 ♂ 24-4-35 Gōrēgāon (H.A.).

Resident. Common. Larger flocks are seen during the cold weather, and at that season evidently some local movements take place in Salsette. We have observed these larks feeding on the seeds of *Spermacoce stricta* picked off the living plant.

*Breeding*: In Salsette S.A. has noted fledglings out of nest on 15 June. At Thal (Kolāba District) on the sea-coast—across the harbour—H.A. found a nest with 2 young on 25 October. Both parents were bringing in caterpillars. The nest was a shallow cup of grass placed under a stone, in open stony land. The mouth-colour of the nestlings was a bright orange red and the tongue (of the same colour) had 3 conspicuous black spots upon it.

**The Indian Rufous-tailed Finch-Lark:** *Ammomanes phoenicura phoenicura* (Franklin).

*Field identification*: Somewhat larger than the House-Sparrow. A plain dark brown sparrow-like bird, rather squat, with a black-tipped bright rufous tail conspicuous in flight. Pairs, running about on fallow land near the tidal mudflats, stubble fields, etc.

Specimens: *B.N.H.S.*: ♀ 10-11-27 Mud Flats, Sion Causeway (S.A.).

Resident. Fairly common. Feeds on the ground upon grass seeds, paddy grains, etc. and also insects. We have frequently observed its habit of rapidly opening and shutting its wings as it moves about in search of food. This manoeuvre is effective in dislodging lurking insects from the little unevennesses of the ground.

Males are usually seen, apparently even in the non-breeding season, rising into the air every now and again and rocketing downwards in steps—nose-diving—with wings pulled in to the sides, and singing on each dive.

*Breeding*: This is a most elusive and circumspect species when breeding and we have not as yet succeeded in marking down a nest in Salsette although between March and May we have several records of birds carrying building material or food for the young.

**The Ashy-crowned or Black-bellied Finch-Lark:** *Eremopterix grisea grisea* (Scopoli).

*Field identification*: A squat, finch-like bird, rather smaller than the House-Sparrow, seen in pairs, parties or small flocks on mudflats and open stony country. The male has black underparts, ashy crown and sandy hen-sparrow-like upper plumage. The female is sandy hen-sparrow-like all over.

Specimens: *B.N.H.S.*: o? 27-2-24 Pāli Hill, Bandra; o? 7-6-25 Trombay Hill at ca. 900 ft. (S.A.); ♂ 30-1-21 Santa Cruz (B. C. Ellison); ♂ juv. 11-11-12; ♂ 11-10-12, ♀ 19-1-13, ♀ 25-1-13 Santa Cruz (Kinneer); ♂ imm. 21-1-11 Bombay (P. F. Gomes); *St. X. C.*: 67 ♂ 8-9-33 Andhēri (H.A.).

Resident. Common. Males constantly soar into space on quivering wings for about 30 feet or so, and sing. The same sort of aerobatics are indulged in as by the Rufous-tailed Finch-Lark, namely shooting up almost perpendicularly and nose-diving in steps with closed wings. In the final step it looks perilously as if the bird was going to dash itself to smithereens on the ground, but the wings are opened out at the last moment and it alights safely on a clod or stone. The grace and ease with which all these moves are executed are a delight to watch. There is a very marked decrease in the numbers of these larks in Salsette during the monsoon months—June to September—and evidently they then emigrate into drier country as in the Deccan. By about the beginning of October the birds are back again in considerable numbers.

*Breeding*: We have seen many nests in all stages of construction or with eggs and young in Salsette during March and April. There is a fledgling in the Society's collection dated 11 November and another immature bird 21 January. This indicates that the birds are double brooded, i.e., some breed in the earlier part of the year and some in the latter part. The nest is a tiny cup-like depression in the ground, lined with fine grass or tow, under the shelter of a stone or small bush in open country. It is usually rimmed with gravel or small stones. In our area c/2 seems to be invariable. The commonest colouration of the eggs is a pale yellowish stone, blotched and speckled with brownish-lavender.

**The White-eye: *Zosterops palpebrosa occidentis* Ticehurst.**

*Field identification:* Size about half that of the House-Sparrow. A tiny bird greenish-yellow above, bright yellow and greyish-white below, with a conspicuous ring of white feathers round the eyes. Slender slightly curved bill. In flocks, in trees and bushes in wooded country and gardens. A pleasant but feeble tinkling or cheeping call, sometimes like a miniature woodpecker 'laugh'.

Specimens: *B.N.H.S.*: ♂ 25-3-29 Tūlśi Lake (S.A.); *St. X. C.*: 242 ♂ 24-11-35 Borivli (H.A.).

Noted: *City:* Warden Road, Cumbala Hill; Government House Grounds, Malabar Hill; *Salsette:* Gōdhbunder, Chembūr, Powāi Lake environs, Shendūr Hill; common on mainland across the harbour.

Resident. Not uncommon in suitable localities. Feeding largely on the nectar of various flowers. Almost invariably present on those of *Bombax*, *Erythrina*, *Woodfordia*, *Calycopteris floribunda* and *Loranthus* clumps. Of the last particularly, it is an important cross-pollinating agent. Flocks move about from tree to tree, keeping up their musical cheeping calls and often clinging upside down on the sprigs in search of insects. They are very partial to the sticky exudation from the petioles of Banyan (*Ficus bengalensis*) leaves.

*Breeding:* Although we have no actual record, we have no doubt that the White-eye nests in Salsette. The specimen of 25 March had enlarged gonads and was evidently preparing to breed. During the breeding season the male develops a pretty, rather feeble, tinkling song reminiscent of the Nilgiri Verditer Flycatcher's. This is uttered from some exposed perch.

**Vigors' Yellow-backed Sunbird: *Æthopyga siparaja vigorsi* (Sykes).**

*Field identification:* Size same as the White-eye or the Purple or Purple-rumped Sunbird. A tiny restless gem of a bird with metallic green head, crimson back, bright yellow rump and crimson-scarlet breast. Longish pointed tail. The female is olive-brown and pale dull yellow, not unlike the female Purple Sunbird. Singly, in wooded hilly country, usually on flowers of *Woodfordia*, *Bombax* and others.

Specimens: *B.N.H.S.*: ♂ 15-11-25, ♂ 29-11-25 Gōdhbunder; ♂ 8-12-25, ♂ 3-3-29 Tūlśi Lake Environs (S.A.); *St. X. C.*: 158 ♂ 9-11-33 Powāi Lake environs (H.A.).

Noted: *Salsette:* Chembūr, near Kanhēri Caves; *Adjacent mainland:* Tānsa Lake, Karnāla Fort, Panvēl (Kolāba District).

Resident? Not uncommon in the well-wooded hilly country in North Salsette, especially in the environs of Powāi, Tūlśi and Vihār Lakes, and about Gōdhbunder. All our records seem to be for the winter months only.

*Breeding:* We have no record from Salsette. In the Western Ghāts, Wenden (*N. & E.*, ii, 250) found a nest—17 September—on the face of a cutting at the upper entrance of Bhōr Ghāt Tunnel No. 19 with c/3, fresh. Another nest was found by him in the same locality on 21 September.

**Loten's Sunbird: *Cinnyris lotenia* (Linn.).**

*Field identification:* Size as above. Adult male black with metallic green and purple sheen, a maroon band across the breast and yellow tufts at the 'armpits'. Underparts sooty brown without gloss. Female brown to olive-brown above, pale dull yellow below. Singly or pairs, in wooded country on trees, shrubs, creepers and *Loranthus* clumps in flower.

Specimens: *B.N.H.S.*: ♂ 16-3-24 Vihār Lake (S.A.); ♂ 4-1-13 Santa Cruz (Kinnear); *St. X. C.*: 00 ♀, 100 ♂ (testes 4 × 3 mm.) 28-9-33 Borivli (H.A.).

Noted: *Salsette:* Chembūr, An dhēri, Powāi, Tūlśi. Marōl: *Adjacent mainland:* Karnāla Fort, Bassein, Alibāg. Aitken (*N. & E.*, ii, 252) describes it as not uncommon at Uran on the island of Karania (Bombay Harbour).

Resident. Common. We have not observed it within city limits, but while it is certainly more partial to wooded country farther afield, it is just possible that it may have been overlooked here.

Sunbirds of all species feed largely on the nectar of flowers and are directly responsible for the cross-pollination of many species. In probing into the flower tubes for nectar with its well adapted slender curved bill, the forehead comes into contact with the anthers and a quantity of the ripe pollen adheres to the feathers. This is transferred to the stigma of the next flower visited.

Their visits to the flowers are thus of vital benefit to the tree. Spiders and small insects usually taken at the flowers, are also eaten.

**Breeding:** On 14 July (1934) H.A. observed a ♀ building on a tree in forest at Tūlśi, ca. 20 ft. up. He found a nest at Powāi Lake on 5 March containing 2 fledglings which both parents were busy feeding. It was the usual sunbird structure—an oblong purse of soft grasses, rubbish and cobwebs, draped with pieces of bark and woody refuse,—with a porched lateral entrance—hung 18 inches from the ground in a bare thorny bush. On 3 May a male was observed courting a female. The tufts of yellow feathers under the 'armpit' are erected during the display to such an extent that they become strikingly conspicuous even from over the bird's back. A second nest with c/2 was noted at Mulund on 26 June (32) It was about 7 ft. up, in close proximity to a nest of red ants (*Ecophylla smaragdina*) and apparently at peace with it.

Aitken (*J.B.N.H.S.*, ii, 52) took a nest containing 1 egg and 1 young just hatched at Uran (Bombay Harbour) in November (1886). He describes the eggs as of a dirty brownish-white ground colour with the smaller end covered with dull brown spots passing into large confluent blotches and forming a cap on the broader end.

From the evidence it is clear that the season in Salsette is not well defined.

### The Purple Sunbird : *Cinnyris asiatica asiatica* (Latham).

**Field identification:** In size and general appearance very similar to Loten's Sunbird. Differs from it in having a metallic purple sheen instead of green, in the absence of the maroon band across breast, and in the underparts being glossy purple-black instead of dull sooty-brown. It also has the yellow and scarlet feather-tufts at the armpit. Female very like that of *C. lotenia*. Similar to the foregoing in habits and habitat except that it is met with oftener in gardens, both in the city and suburbs.

**Specimens:** *B.N.H.S.* : ♂ 2-6-25 Malād (E. Henricks); ♂ 28-8-21 Bhāndūp (G. C. Amore); ♂ 7-2-13 Andhēri (Kinneer); ♂ 17-11-27 foot of Trombay Hill (S.A.); *St. X. C.* : 161 ♂ 9-11-33 Powāi Lake (H.A.).

Resident? Common.

**Noted:** *City:* Girgaum, Bhūlēshwar, Byculla, Chowpāti, Wālkēshwar, Malabār Hill, Warden Road etc.; *Salsette:* Pāli Hill, Bandra; Khār, Gōrēgāon, Borivli, Kandivli, Chembūr, Gōdhbunder, Thāna and elsewhere generally.

An unflinching attendant on flowering trees, shrubs and creepers in gardens. Along with the Purple-rumped species, it is invariably present on the blossoms of the Drumstick tree (*Moringa oleifera*) and on those of the tree parasite, *Loranthus*. For the latter it is a most important cross-pollinating agent. Breeding males, and those about to breed, habitually perch on the topmost branches of a tree, a telegraph wire or in some other exposed situation and utter their excited 'song' *cheewit-cheewit-cheewit*, repeated in quick succession from 2 to 6 times. While thus engaged the bird pivots from side to side and nervously raises and lowers his wings.

**Breeding:** Curiously enough we have no record of its nest from our area or from our immediate neighbourhood. Is it a local migrant?

### The Purple-rumped Sunbird : *Cinnyris zeylonica* (Linn.).

Mahrattī name : *Chūmka*; Hindūstāni : *Shakar-khōra*.

**Field identification:** Size as last. Head, upper plumage and breast mostly metallic green, crimson and purple. Rump metallic bluish purple. Lower parts bright yellow. Female sober olive-brown and dull yellow as with the other sunbird species. Habits and habitat same as in the previous species, but this is even more common by human habitations.

**Specimens:** *St. Xavier's College:* 25 ♂? juv. 3-8-33, 26 ♀ juv. 10-9-33 Andhēri; 55 ♂ 20-8-33 Chendevli (H.A.).

**Noted:** *City:* Girgaum, Khēt-wādi, Chowpāti, Bhūlēshwar, Byculla, Wālkēshwar, Malabār Hill, Fort (Prince of Wales Museum garden), Warden and Pedder Roads, Apollo Bunder, Colāba and elsewhere. Common everywhere in the suburbs and Salsette.

Resident. Very common. Its notes and song are, with a little practice, easily distinguishable from those of the Purple Sunbird.

**Breeding:** We have records of numerous nests in Bombay City and Salsette either under construction or with eggs or young in January, February, April,

May, July, August, September and October. The period from July to September, however, is when breeding is at its height. The nest is like that of Loten's Sunbird. It is usually suspended from the tip of an overhanging branch at moderate heights—between 6 and 12 feet. It is frequently built in creepers growing on the trellis work of verandahs of inhabited bungalows and the birds do not seem to mind the proximity of human beings. Building work is done solely by the female, but the male usually accompanies her to and from the nest while she is at work, encouraging her as it were by little snatches of song from a nearby perch. The male does not share in the incubation which takes 14-15 days. Both parents feed the young. These leave the nest when 16-17 days old. We have invariably found 2 eggs or young in our area. In ground colour the eggs are usually grey with a greenish or buff tinge; they are flecked and speckled with greyish-brown, more profusely round the broader end.

**Tickell's Flowerpecker :** *Dicaeum erythrorhynchos erythrorhynchos* (Latham).

*Field identification :* Somewhat smaller than a sunbird. A restless olive-brown bird with grey-white underparts and flesh-coloured slender bill. Singly, usually on clumps of the tree parasites *Loranthus* and *Viscum* on mango trees, hopping about energetically and uttering *chip, chip, chip*, etc.

Specimens : *B.N.H.S.* : ♂? 16-2-24 Pāli Hill; ♂? 8-12-25 Gödhbunder (S.A.); *St. X. C.* : 97 ♀ 28-9-33 Borivli (H.A.).

Noted : *City* : Government House Grounds—Wālkēshwar; Victoria Gardens—Byculla, Chowpāti, Colāba, Malabār Hill; *Salsette* : common everywhere.

Resident. Common. Especially plentiful in orchards where *Loranthus* and *Viscum* abound on the mango trees. It fertilises the *Loranthus* blossoms in its attempts to reach the nectar, and eats the berries of both almost exclusively when available. It is thus perhaps the most important agent in the spread of these parasites in Salsette.

*Breeding :* According to EHA (*C.B.B.*, p. 68) the breeding season here is March and April. H.A. has taken fresh eggs at Andhēri on 4 February ('33) and also on 7 March ('36) at Powāi. On 26 April ('36—Borivli) he observed a bird visiting a nest in a high tree evidently containing young, and on 5 May a young bird just out of nest was being fed by its parents.

The nest of Tickell's Flowerpecker is a hanging oval purse like that of a sunbird but somewhat smaller and of neater appearance. It is made of soft fibres and vegetable down and not draped on the exterior with rubbish. It may be at any height from 10 or 15 to 40 feet. Both sexes build the nest and feed the young. The normal clutch is of 2 eggs, white in colour, unmarked.

**The Thick-billed Flowerpecker :** *Piprisoma agile agile* Tickell.

*Field identification :* Size and general appearance of the last, but the underparts faintly streaked brown. The bill is thick and finch-like and of a slaty-grey colour. Singly, in same facies as Tickell's Flowerpecker and very similar to it in habits.

Specimens : [*St. X. C.* : 139 ♂ 21-10-33 Kihim (Alibāg, Kolāba District).] None collected in Salsette.

Noted : *Salsette* : Powāi Lake environs, Chembūr, Andhēri, Borivli. Not within city limits.

Resident. Not uncommon. Its food consists largely of the berries of the tree parasites *Loranthus* and *Viscum*, and it shares with Tickell's Flowerpecker the responsibility for their spread and for the resulting damage to mango orchards. Other berries such as those of *Lantana camara* and *Bridelia retusa* are also greedily taken, as well as Peepal and Banyan figs. *Bombax* and *Erythrina* flowers are regularly resorted to for the nectar, and spiders likewise form part of the dietary. It utters *chik, chik* as it restlessly hops about the foliage, but its notes are easily distinguishable from those of the previous species. While thus engaged, it spreads out its stumpy square little tail and screws it nervously edgewise from side to side.

*Breeding :* On 5 March ('36—Powāi) an adult was observed feeding two juveniles just out of nest. On 24 April ('36—Andhēri) a bird was building ca. 15 ft. up in a *Ficus* of sorts. Red Ants (*Ecophylla*) were swarming on this tree but apparently did no harm to the nest. On 2 May the eggs, c/3—partly set—were removed from this nest. On 3 May ('36—Borivli) another

nest was noted in an *Erythrina* tree also about 15 ft. up. The nest—a hanging oval purse of reddish vegetable down, about 4 inches long—is not intentionally concealed, but is usually so cryptically coloured that at a casual glance it looks like a dry rolled-up leaf. It is usually suspended from near the tip of an outlying twig. The attachment is not from a point but is about 2 inches wide along the length of the twig. C/2 or C/3 is the normal. The eggs are pinky-white or salmon in ground colour, speckled and blotched with reddish- or purplish-brown.

**The Indian Pitta :** *Pitta brachyura* Linn.

Hindustāni name : *Nowrang* (= 9 colours).

*Field identification* : Size about that of the Myna. Stub tail. A gaudily coloured bird mostly green, blue, crimson, fulvous and black. Singly, on the ground amongst scrub undergrowth in jungle. When disturbed, it flies up into low trees with a whirr of its wings like a slow game bird.

Specimens : *B.N.H.S.* : ♀ 2-6-25 Bombay (J. Azavedo); ♂ 4-6-21 Bombay (B. C. Ellison).

Noted : *City* : Colāba, Malabār Hill; *Salsette* : Pāli Hill, Bandra; Gōdhbunder, Powāi Lake Environs. Not uncommon on the mainland across the harbour in the monsoon.

Monsoon visitor. Its arrival in Bombay and Salsette, presumably from South India, synchronizes more or less with the South-west Monsoon. We have noted it here between 15 May and 15 October (one on 28 April at Alibāg!) although by about mid-September most birds have departed. We really know very little beyond conjecture about the local movements of the Pitta, and here is a problem which only the ringing method can help to solve. The House-Crows of the city and suburbs are usually the first to herald the arrival of the birds by their relentless persecution of them. Many a refugee is picked up every year, disabled by these blackguards or caught in a room into which it has blundered to escape its pursuers. Its call is a loud clear double whistle *wheet-tew* heard mostly in the early morning and late evening, and also on cloudy overcast days. These calls are uttered at the rate of about 3 or 4 in 10 seconds and are sometimes kept up for over 5 minutes at a stretch. Each time the bird calls it pulls itself upright and jerks its head well back as when swallowing water. In between the calls the stumpy tail is wagged slowly and deliberately up and down. The bird progresses on the ground in search of insects by long hops, like a thrush.

*Breeding* : On 3 June ('36—Powāi) H.A. observed a bird building in a *Loranthus* clump on a mango tree about 30 ft. up. The tree was situated in a patch of fairly open country near a village. The bird was busy collecting sticks from the ground nearby, one of which was over a foot long.

The nest of the Pitta is a deep cup of twigs and rootlets, domed and often larger than a football. We have no other record of its nesting in our area.

**The Southern Yellow-fronted Pied Woodpecker :** *Dryobates mahrattensis, mahrattensis* (Latham).

*Field identification* : Size about that of the Bulbul. Spotted black and white plumage with yellowish-brown crown and scarlet patch on abdomen. In the male the hind crown is also scarlet. Long, stout, pointed bill and stiff, wedge-shaped tail. Singly or pairs, in orchards and wooded country. Clinging to trunks or branches of trees and scuttling upwards in spurts and spirals, tapping the bark at intervals. Flies with rapid wing-beats interspersed with pauses.

Specimens : *B.N.H.S.* : ♂ 11-3-24 Pāli Hill, Bandra (S.A.); ♀ 30-1-21 Santa Cruz (Ellison); ♂ 19-1-25 Andhēri (H. Hearn). *St. X. C.* : 255 ♀ juv. 8-3-36 Powāi Lake Environs (H.A.).

Noted : *City* : Warden Road, Fort, Colāba. *Salsette* : Chembūr, Gōdhbunder, Borivli, Mulund, etc.

Resident. Fairly common. The call note is a sharp *click click* or *clik-r-r-r-r*. We have occasionally observed it feeding on the nectar of *Bombax* and *Erythrina* flowers.

*Breeding* : EHA (*C.B.B.*, p. 59) says they breed here in February and March. We have seen a nest with young—both parents bringing caterpillars, etc.—on 21 March ('26—Chembūr). It was in a more or less horizontal mango branch about 12 feet above the ground, with the entrance hole on the underside.

The parent birds were very circumspect, and both before and after their visits to the nest-hole kept hopping about the adjacent branches for a considerable while.

**The Rufous Woodpecker:** *Micropternus brachyurus jerdonii* (Malherbe).

*Field identification:* Size about that of the Myna. General colour chestnut-rufous. A typical woodpecker with stout straight, pointed bill and stiff wedge-shaped tail. Singly or pairs, in orchards or lightly wooded country.

Specimens: *B.N.H.S.*: ♂ 15-1-24 (Prater), ♀ 9-2-08 (Kinnear) Andhəri; *St. X. C.*: 167 ♀ 19-11-33 Borivli (H.A.).

Noted: *Salsette:* Chembūr, Trombay, Mulund.

Resident. Fairly common. Its food in our area consists to a very large extent of *Crematogaster* ants and their larvæ. To get at the insects, the bird perches in the passerine manner across a branch adjoining the carton-like arboreal nest of the ants, and digs into it with its bill. The ants are picked off as they swarm to the site of the disturbance. In a garden at Deonar (Chembūr) we have on several occasions observed it clinging on the stems of banana trees and probing into the soft tissues near the bases of the leaves, evidently for the sap. One was noted eating a Banyan fig perched like a barbet across a branch. Its call is a high-pitched *ke-ke-ke-ke* something like the Myna's. The alarm note is a quick, low *qu-ük*.

*Breeding:* The Rufous Woodpecker is remarkable for habitually utilising the carton-like nests of *Crematogaster* ants for its own. H.A. has found 2 such nests in Salsette (19 April '35 and 31 March '36—Borivli) at heights of about 20 and 25 feet. Unfortunately both these were empty at the time, but the birds were flushed from within. The ants' nests had been hollowed out and a neat round entrance hole was made in them at the side. H.A. noted that the nests were alive with ants at the time!

N. F. T. Wilson (*J.B.N.H.S.*, xi, 744) found this woodpecker breeding at Thāna in April.

**The Golden-backed Woodpecker:** *Brachypternus benghalensis puncticollis* (Malherbe).

Mahrātti name: *Bhandāri*.

*Field identification:* Size slightly larger than that of the Myna. Head black and white, with a crimson crest. Back and upper parts of wings golden yellow. Underparts whitish with black streaks. The female has no crimson in the crest. Singly or pairs, in wooded country, mango orchards and cocoanut groves, clinging to the tree-trunks, running up or backing down them in jerks and spirals and tapping the bark for insects. Flight of rapid wing-beats with pauses, usually accompanied by a loud, harsh chattering call or 'laugh'.

Specimens: *B.N.H.S.*: ♀ 10-4-03; *St. X. C.*: 539 ♂?

Noted: *City:* Warden Road, Wālkēshwar, Malabār Hill. *Salsette:* Chembūr, Pāli Hill, Khār, Andhəri, Borivli, Gōdhbunder, Tūlsi Lake environs, Jūhū, Māhim.

Resident. Fairly common. Its food consists largely of large black ants (*Camponotus* sp.) picked off the ground or on trees. We have observed it feeding on nectar from the blossoms of *Erythrina indica* and drinking rain water collected in the casing of the inflorescence of a cocoanut palm.

*Breeding:* The only two nests of this species we have come across in our neighbourhood were at Kihim (Alibāg Talūka) across the harbour. One (9 April) was in a decaying cocoanut trunk about 18 ft. up and contained young which both parents were busy feeding. The nest was evil-smelling and the young made a screechy hissing sound when approached. The second nest was in a hole in the vertical stem of an Oondi tree (*Calophyllum inophyllum*) about 8 ft. from the ground. On 13 May ('31) this contained 3 fresh eggs. The nest hollow was about 15 inches deep and unlined. The brooding bird sat so close that it was caught by hand. The eggs are roundish ovals, glossy china white, unmarked.

**The Black-backed Woodpecker:** *Chrysocolaptes festivus* (Bodd.).

*Field identification:* Size as the foregoing. Similar to it in general appearance except that the back is black instead of golden yellow. Upper parts of the wings golden-olive. Crown and crest crimson in male, golden yellow in female. Singly or pairs in thin jungle.



Nest of the Rufous Woodpecker [ *Micropternus brachyurus jerdoni* (Malherbe) ] in carton-like nest of *Crematogaster* ants.

( Photograph of an exhibit in the Bird Gallery, Prince of Wales Museum, Bombay. )





Specimens: *St. Xavier's College*: 94 ♂ 28-9-33 Borivli (H.A.).

Noted: In the environs of Powāi and Tūsi Lakes.

Resident. Not uncommon in parts of N. Salsette. Pairs keep in touch with each other by means of a *ch-chrr-chrk* call. The usual chattering call is something like that of the Golden-backed Woodpecker, but louder and more 'nasal'.

We have no records as yet of its breeding within our area.

**The Malabar Heart-spotted Woodpecker**: *Hemicircus canente cordatus* Jerdon.

*Field identification*: Size about that of the Bulbul; squatter and with a shorter and wedge-shaped tail. Black above, including crest, dark olive below. White-speckled forehead in male, buffy-white in female. Whitish rump and some white in wings. Chin, throat and sides of neck buffy white. A smallish pied bird with a large head and thin neck, clinging to, and running up and down or around the branches of trees and shrubs in forested hilly country.

Specimen: *St. X. C.*: ♀ 24-11-35 Borivli (H.A.).

Noted: Tūsi Lake environs (once only).

Presumably resident. Rare; unknown in these parts until the specimen was obtained.

*Breeding*: The gonads of the specimen measured 6×4 mm. It was flushed from within a nest-hole in a rotten branch, about 12 ft. up, in light forest.

**The Wryneck**: *Iynx torquilla torquilla* Linn.

*Field identification*: Slightly bigger than the House-Sparrow. Above grey-brown with black markings; below whitish with black arrow-head markings producing a cross-bar pattern. Colour scheme of back very like a nightjar's. The peculiar dipping flight and general behaviour rather finch-like. Singly, in small tree- or scrub- jungle especially babool and date. Often hopping on ground in search of insect food.

Specimens: *B.N.H.S.*: ♀ 8-3-24 Pāli Hill, Bandra (S.A.); oo? 21-3-24 Chembūr (S.A.); ♂ 31-8-06 Fort, Bombay (L. H. Saville); *St. X. C.*: 82 ♂ 22-9-33 Jūhū (H.A.).

Noted: Khār, Andhēri, Gōdhbunder.

Winter visitor. Fairly common though unobtrusive. Earliest record 31 August; latest 9 April. Its call is a feeble but rapid, high-pitched *chk-ch-ch-ch*, etc. like that of the smaller woodpeckers. Its food consists largely of the small black terrestrial ants. The stomach of a specimen contained over 500 of these insects. The birds appear to localise themselves and may be found in the same patch of country day after day.

**The Bombay Green Barbet**: *Thereiceryx zeylanicus inornatus* (Walden).

Mahrātti name: *Kokrus*.

*Field identification*: About as big as the Myna. An ungainly grass-green bird, paler underneath, with streaked brownish head, neck, breast and upper back. Heavy conical orange-brown bill with coarse bristles at the base. A bright orange naked patch round the eye. Singly or parties, on Banyan and other forest trees in fruit, in well-wooded country. Heavy noisy flight.

Specimen: *St. X. C.*: 93 ♂ 28-9-33 Borivli (H.A.).

Noted: Vihār, Tūsi and Powāi Lake environs; Borivli, Kandivli, Gōdhbunder.

Resident. Common in the wooded hills of North Salsette and in the 'lake district'. Its call *kr-r-r-r*, *kūtroo*, *kūtroo*, *kūtroo*, etc. resounds in these localities. As soon as one bird begins calling, a second invariably takes it up at once. The sudden report of a gun will set off half a dozen birds calling! Its food consists of *Ficus* figs and berries of many kinds. We have also observed it at the flowers of *Erythrina stricta* for the nectar.

*Breeding*: We have not taken any nests in Salsette, but on 21 March ('35—Gōdhbunder) a bird was observed entering a nest-hole in a dead stump about 15 feet up.

**The Crimson-breasted Barbet or Coppersmith**: *Xanthoolema haemacephala indica* (Latham).

Mahrātti name: *Sonār*.

*Field identification*: Slightly larger and dumpier than the House-Sparrow. A grass-green bird with bright crimson forehead and a patch of the same colour on the breast. Below, yellowish-white streaked with green. Naked

skin round eye dull crimson. Bill heavy, with coarse hairs at base. Short square tail appearing triangular in flight. Singly or loose parties, in Banyan and other trees in fruit, both within and outside city limits.

Specimens: *B.N.H.S.*: ♂ imm. 28-5-15 Bombay (Kinnear); *St. X. C.*: ♂ 22-2-33 An dh ě ri (H.A.).

Noted: *City*: Bālārām Street and Sleater Road—near Grant Road; Warden Road, Chowpāti, Bhūlēshwar, Fort, Colāba, Government House Grounds—Wālkēshwar, Victoria Terminus, Cruikshank Road and elsewhere. Common everywhere in Salsette.

Resident. Very common. Its monotonous *tūk-tūk-tūk* as of a coppersmith at work, may be heard in the busiest parts of the city and vies with the shouts of vendors and traffic noises of every description. Its food consists of fruit of which *Ficus* figs form an overwhelming proportion. We have occasionally observed it launching ludicrous sallies after moths and winged termites. Aitken (*J.B.N.H.S.*, viii, 326) has also made a similar observation. We have noted a canary yellow specimen which was particularly conspicuous in its leafy environment.

*Breeding*: In Bombay City we have seen nests at Warden Road, Bālārām Street, Grant Road, Girgaum, Colāba, near Victoria Terminus, Khēt w ā d i and Bhūlēshwar. Numerous others in the suburbs and Salsette. The principal breeding months here are February, March and April. One in Bombay City was excavating a hole on 25 August so it is probable that some birds breed later in the year also. The nest-holes are excavated in decayed vertical branches of trees usually at moderate heights, between 12 and 20 feet, by the birds themselves. Sometimes horizontal branches are used when the entrance hole is placed on the underside. Softwood trees such as *Erythrina*, *Moringa*, Mango and Karanj (*Pongamia*) are mostly selected for the purpose. The nest-hole is 6 to 8 inches deep; it is unlined and has a round entrance hole about 2 inches in diameter. Usually 2 or 3 eggs are laid, unmarked white, elliptical, and of a smooth texture. Both sexes feed the young.

[**The Cuckoo**: *Cuculus canorus* ssp.]

Specimen: *St. X. C.*: ♂? juv. 20-10-33 Rēwas, Alibāg Talūka, Kolāba District (H.A.).

The above was shot off a wire fence near the Dharamtar Creek. As it is in juvenile plumage the race cannot be determined. H.A. has also observed (13 October) a Cuckoo at Bassein on the mainland immediately north of Salsette.]

**The Indian Cuckoo**: *Cuculus micropterus micropterus* Gould.

*Field identification*: Size about that of the Pigeon, somewhat slenderer and with a longer tail. Upper parts brown except head and neck which are ashy-grey. Breast pale grey. Underparts whitish, cross-banded with black. A black band across tail, near the tip. Singly, in wooded country.

Specimen: *St. X. C.*: 267 ♂? Powāi (H.A.).

Noted: Tūli Lake environs (30 July '35).

Status uncertain. Uncommon. Its call may be syllabified as *Cross-word-puzzle* or *What's your trouble*. H.A. likens it to that of the Scimitar Babbler (*Pomatorhinus horsfieldii*).

**The Common Hawk-Cuckoo**: *Hierococyx varius* Vahl.

*Field identification*: Size and shape as last. Above ashy-grey, below whitish, cross-banded with brown. General colouration very like the Shikra's. Flight and movements also reminiscent of that hawk. Singly, in mango orchards and wooded country.

Specimens: *B.N.H.S.*: ♂ imm. 13-11-08 Pāli Hill, Bandra (Major H. J. Walton); *St. X. C.*: 172 ♂ 19-11-33 Borivli (H.A.).

Noted: An dh ě ri.

Resident? Not common. Its obstreperous and aggravating *brain-fever* calls usually begin to be heard in early May and continue right up to August or September. The bird is thus always more in evidence at this season and as it is likely to be overlooked at other times of the year, when silent, it is possibly less uncommon in our area than it appears.

*Breeding*: We have no evidence of its breeding here beyond the immature specimen in the Society's collection.

**The Indian Plaintive Cuckoo** : *Cacomantis merulinus passerinus* (Vahl.).

*Field identification* : Size about that of the Bulbul. Above dark ashy-grey, below paler. Tail blackish with white tip. White patch on wing noticeable in flight. Singly, in mango orchards and wooded country.

*Specimen* : *St. X. C.* : ♂ 7-8-33 Görêgâon (H.A.).

Presumably a monsoon visitor. Our records are only from the middle of May to the end of August (once heard 30 October). It is quite common in June in and about the scrub country along the base of Trombay Hills and at Powâi Lake, and its call is then on the air everywhere. It consists of several rather plaintive whistling notes : *Pee-pîpee-pee, pîpee-pee*, etc. When calling (from some exposed part of a tree) the tail is depressed and the rump slightly arched, with the wings drooping at the sides. Its food consists of grasshoppers, bugs and caterpillars. H.A. noted it gobbling up hairy caterpillars of the moth *Nepita conferta* swarming on a loose stone wall.

*Breeding* : We have no record from Salsette. In the Deccan it lays commonly in the nests of the Tailor-Bird and the Ashy Wren-Warbler, both of which are also breeding in Salsette while the cuckoo is with us.

**The Indian Bay-banded Cuckoo** : *Penthoceryx sonneratii* [*sonneratii* (Lath.) ?].

H.A. has only one sight record of a single bird of this species in Salsette : Tûsi-Vihâr Lake environs, 10 October.

**The Drongo Cuckoo** : *Surniculus lugubris lugubris* (Horsf.).

*Field identification* : Size of the Bulbul or Black Drongo, with the deeply forked long tail of the latter. In colour and appearance it is very like the Black Drongo and liable to be confused with it at a casual glance. If carefully watched, however, its flight and habits are distinctly cuculine. Singly, in well-wooded tracts, especially with an abundance of Tād or Palmyra palms (*Borassus flabellifer*).

*Specimens* : *B.N.H.S.* : ♂? 14-6-25 Trombay Hills, ♂? 21-6-25 Powâi Lakê (S.A.); *St. X. C.* : ♀ 27-9-33 (H.A.) This last is in heavy moult, hence the sub-species is unconfirmed.

*Noted* : *Salsette* : Borivli, Kandivli, Chembûr.

Monsoon visitor? We have recorded it here only between 2 June and 27 September. During this period it is greatly in evidence by virtue of its distinctive call of 6 (sometimes 7 or 8) short whistling notes. The notes—1-2-3-4-5-6, etc.—rise in scale and end abruptly. While calling, the body is carried in a horizontal position and its resemblance to the Drongo is then least pronounced. Occasionally it may be heard calling all night, but especially between 2 and 4 a.m. Its food consists principally of caterpillars, the hairy ones being much relished.

We are not satisfied with the suggestion that its close outward resemblance to the Black Drongo is of real advantage to the bird, and are unable to say as yet what the significance of it may be.

*Breeding* : We have no direct evidence of its breeding in Salsette. The specimen of 27 September, however, had a fully mature ovary with the largest follicles 3 mm. in diameter. This bird was obviously preparing to lay, in spite of the fact that it was in heavy moult at the time. Elsewhere, the eggs of this cuckoo have been recorded from nests of the Black Drongo and from those of the Iora and the Black-fronted Babbler (*Rhopocichla*).

**The Pied Crested Cuckoo** : *Clamator jacobinus pica* (Hempr. & Ehr.).

Mahrâtî name : *Tiu*.

*Field identification* : Somewhat larger than a dove and with a longer tail. Black above—including crest—white below. A white roundish patch on wings conspicuous in flight. Singly or pairs, in and about groves of trees and in scrub country dotted with large trees. Usually very noisy while with us.

*Specimens* : *B.N.H.S.* : ♂ 10-6-15 Bombay; ♂? 1-6-24 Pâli Hill, Bandra (S.A.); ♂? 7-11-00 Apollo Street, Bombay (E. Comber).

*Noted* : Khâr, Andhêri, Borivli, Gôdhbunder, Chembûr.

Monsoon visitor. Common. Arriving at the end of May (earliest 25th) and leaving again by the end of October (latest 11 November). The birds are most abundant and noisy between 15 June and the end of August. Pairs are usually seen chasing each other and calling—a loud, rather plaintive, tinkling

*piu, piu, pee-pee-piu, pee-pee-piu*, etc. Its food consists of hairy caterpillars, grasshoppers and other insects.

In Bombay City, the Pied Crested Cuckoos are much persecuted by the local House-Crows. The specimen of 7 November 1900 had taken refuge from them in the Society's Rooms at 6, Apollo Street. Similarly 3 such refugees were caught in St. Xavier's College and 2 in the Prince of Wales Museum between 25 May and 1 June (1936).

*Breeding*: We have no record from within the limits of Bombay and Salsette, but at Kihim (across the harbour—in Alibāg Talūka) we have found this species breeding from July to September. The usual host there is the Bombay Babbler (*Turaoides s. somervillei*). On 16 August a pair of Pied Cuckoos were observed in copula. A specimen shot on the 29th of that month had a complete oviduct egg of a pale blue colour. The laid egg is a deeper blue and approximates closely to that of the fosterer.

### The Indian Koel: *Eudynamis scolopaceus scolopaceus* (Linn.).

*Field identification*: Somewhat larger than a dove and with a longer tail. Glossy black all over—like a slender Jungle-Crow—with a yellowish-green bill. The female is blackish-brown, spotted above and barred below with white. Singly or pairs, in gardens and groves of trees.

*Specimens*: *B.N.H.S.*: ♂? 22-5-16 Malabār Hill, Bombay (J. E. Needham); *St. X. C.*: 39 ♀ 1-8-33 Andhēri (H.A.).

*Noted*: *City*: Victoria Gardens—Byculla, Parēl (about Haffkine Institute), Government House Grounds—Wālkēshwar, Ridge Road and the neighbourhood—Malabār Hill, Fort. *Salsette*: Pāli Hill—Bandra, Khār, Borivli, Mulund, Bhāndūp, Gōdhbunder, Thāna, etc.

*Resident*. Common. It is, on the whole, silent during the winter months but becomes extremely obstreperous from March to July. At that season its shrill shrieking call: *kūoo, kūoo*, etc. resounds through the countryside all day. It begins on a low note, but rises in scale at each successive *kūoo* until at the seventh or eighth it reaches feverish pitch and breaks off abruptly. The bird soon begins it all over again, however. By an imitation of its calls, which the bird insists on answering, village boys are wont to drive the bird frantic and hoarse! It is perhaps the earliest riser amongst our local birds being usually up and calling long before the House-Crow and the Magpie-Robin, who tie for second place. We have frequently heard it as early as 3-45 of a summer morning. The female Koel utters a sharp *kik-kik-kik* as it flies from tree to tree or hops about among the branches. Its food consists of hairy caterpillars and other insects, but a large variety of fruits and berries is also eaten, amongst which *Ficus retusa*, *F. bengalensis*, *F. religiosa*, *Bridelia*, *Streblus asper* and *Phyllanthus reticulatus* are common. We have observed it plucking and swallowing the nuts of the Fish-tail Palm (*Caryota urens*) and, on another occasion, a full clutch of eggs from a nest of the Red-whiskered Bulbul (*Otocompsa jocos*a).

*Breeding*: The laying season is in May and June and corresponds with that of its most usual host the House-Crow (*Corvus splendens*). Occasionally the Jungle Crow which nests somewhat earlier, is also victimised. H.A. (see *J.B.N.H.S.*, xxxv, 458) once found a House-Crow's nest at Bhāndūp (9 June) containing 11 Koel eggs exclusively. These belonged to two different types and were probably the product of two females. While crow and Koel eggs may often be found together in a nest, it is but rarely—in our experience, never—that one comes across a victimised crow's nest containing both crow and Koel young. Usually there is only 1—very exceptionally 2—of the latter in sole possession, from which it would appear that like the Cuckoo, the Koel hatchling also disposes of its rightful foster-brothers by heaving them out of the nest. It is surprising how thoroughly an intelligent bird like the crow will be duped into incubating the impostor's eggs and rearing its young especially when the young Koel, which is speckled and barred with white, is so unlike its own young in appearance.

We have never witnessed a Koel in the act of depositing her egg and there is some doubt as to the actual procedure. From circumstantial evidence, however, it appears that she snatches the opportunity for doing so while the male Koel draws the owners away from the nest by leading them a chase. The eggs of this cuckoo are very like the crow's in appearance—pale greyish-green or stone-colour, speckled and blotched with reddish-brown.

**The Common Crow-Pheasant or Coucal :** *Centropus sinensis parroti* Stres.

Local name (Mahrāṭṭi?): *Kūmar Kaūla*.

*Field identification:* Size that of the Jungle-Crow. A striking glossy black bird with chestnut wings and long broad tail. Singly or pairs, in scrub jungle, mango groves, etc. Usually stalking along the ground like a pheasant searching the undergrowth for food.

Specimens: *B.N.H.S.*: ♂? 27-12-23 Andhēri (S. H. Prater); *St. X.C.*: 53 ♀ 20-8-33 Chendevli, Salsette (H.A.).

Noted: *Salsette*: Marōl, Pāi Hill—Bandra, Trombay Hills and Chembūr, Tūlsi Lake environs, Gōdhbunder, Thāna, Malād, etc.

Resident. Common. Its call is the familiar *ook, ook, ook*, etc. so commonly heard on the countryside especially during the hot weather. Besides this it has a large variety of croaks and chuckles—some distinctly weird—which are usually heard in the breeding season. Its food consists of caterpillars, grasshoppers, beetles, bugs and insects of every description. In addition, we have found it greedily devouring mice, frogs, geckos (*Hemidactylus*), skinks (*Mabuia*), Bloodsucker lizards (*Calotes*) and Green Whip Snakes (*Dryophis mycterizans*). It is also highly destructive to the eggs and young of other birds.

*Breeding:* The Crow-Pheasant is one of the respectable cuckoos that do not foist their domestic responsibilities upon other birds. Its nest is a large globular structure about a foot in diameter, of coarse grasses, strips of palm leaves, etc. placed at moderate heights in a thorny bush or tree. We have not found a nest within the limits of Salsette as yet, but the female shot on 20 August ('33) had soft ovarian eggs, indicating that the breeding season here is during the S.-W. Monsoon.

**[The Large Alexandrin: Paroquet :** *Psittacula eupatria* ssp.

Hindustani name: *Hiraman tōta*.

*Field identification:* Size about that of the Pigeon. Slenderer and with a long pointed tail. A grass green paroquet with a black and rose-pink collar in the male (absent in female). A conspicuous maroon-red patch on the shoulder. Usually seen in fanciers' cages.

We have only observed the Large Paroquet flying overhead in small parties in various parts of Bombay City, but never in the well-wooded or hilly tracts of Salsette where one would expect to find it in the wild state. From this it would seem that all the birds here are escapes, since it is a favourite cage bird and numbers are always for sale in the Crawford Market. According to Barnes (*J.B.N.H.S.*, v, 13) these imported birds mostly come from the Central Provinces. The race therefore would be the typical one *P. e. eupatria*. It is said to be a good 'talker'. Its call is deeper and more 'sedate' than that of the Rose-ringed Paroquet.]

**The Rose-ringed Paroquet :** *Psittacula krameri manillensis* (Bechst.).

Local name: *Pōpat*.

*Field identification:* A somewhat smaller replica of the above, but lacking the red shoulder-patch. Parties, usually noisy, in mango orchards and thinly wooded country; also in gardens and trees in the city. Occupying holes in outer brick walls of buildings and temples. Commonly caged.

Specimens: *B.N.H.S.*: ♂? 25-3-24 Warden Road, Cumbala Hill (S.A.).

Noted: *City*: Chowpāti (Wilson College neighbourhood), Fort, Elphinstone Circle, Colāba, Churchgate, Bhūlēshwar, Parēl, Byculla, etc. *Salsette*: Pāi Hill—Bandra, Andhēri, Borivli, Gōdhbunder, Powāi Lake environs, Chembūr, Bhāndūp, Thāna, etc.

Resident. Common. Destructive to ripening mangoes and fruit of every kind. Invariably present on *Bombax* and *Erythrina* flowers biting off the petals and eating the nectar. It is destructive in its methods and of no service in cross-pollination. At Dāna Bunder and the Goods sheds of the G.I.P. and B.B. & C.I. Railways, these paroquets may usually be seen clambering about and biting into the grain bags arriving from upcountry, and helping themselves to the contents.

*Breeding:* The Rose-ringed Paroquet breeds in suitable holes in walls of buildings and trees, both within and without city limits, not excluding the noisiest and most congested parts of the town. February, March and April are the months most favoured for nesting. In trees, woodpecker- and barbet-holes are utilised, as well as those excavated by the birds themselves. The

rotten stems of Palmyra palms standing in the water at Powāi Lake and elsewhere, and coconut palms at Jūhū, Māhim, etc. offer suitable sites. The normal clutch is of 3 or 4 eggs, roundish oval, white, unmarked.

**The Blossom-headed Paroquet :** *Psittacula cyanocephala cyanocephala* (Linn.).

*Field identification :* Smaller than the last. About the size of the Myna; slenderer and with a long pointed tail. General colour yellowish green. The male has a beautiful bluish-red head which in the female is bluish-grey. The bright maroon-red patch on the shoulder of the male is absent or obsolete in the female. In flight the peculiar sharp single interrogative cry *tooi?* and the yellow tip of the tail are diagnostic features. Small flocks in wooded country, Jāmūn groves, etc.

Specimens : *B.N.H.S.* : 00? 2-12-25 Kūrla (Baretto).

Noted : *Salsette* : Pāli Hill—Bandra (M. Suter!), An dhēri, Chembūr, Borivli, Tūlsi Lake, Powāi. Not in city limits.

Status uncertain. Our records here are only between 7 August and 31 March, but we have noted a flock at Kihim (across the harbour) on 11 June. It is possibly largely a dry season visitor from the Ghāts and Deccan.

**The Lori quet :** *Coryllis vernalis* ssp.

*Field identification :* Size about that of the House-Sparrow. A bright yellowish-green little parrot with a red bill, short square tail and a crimson rump. Singly or small parties, among leafy trees in wooded country.

No specimens.

Status uncertain. Not uncommon, but patchily distributed and to some extent undoubtedly also a local migrant. We have no record of it in Salsette between 23 June and 9 September. On the other hand, at Kihim (Alibāg Talūka) ca. 15 miles from Bombay City, across the harbour, they appeared to arrive in the first week of June (1930) and were very common throughout the monsoon, disappearing completely by the beginning of November! These little birds on account of their small size and wonderfully obliterative colouration are usually visible only when flying across from one tree to another. The flight is swift, consisting of several rapid wing-strokes followed by a short pause and a consequent slight dip. It is invariably accompanied by a sharp trisyllabic *chee-chee-chee*, repeated every couple of seconds or so. Their food consists of *Ficus* figs and other fruits and berries. The nectar of flowers, especially *Erythrina*, is also largely eaten.

We have no record of its breeding in Salsette or on the adjacent mainland.

**The Indian Roller :** *Coracias benghalensis indica* Linn.

*Field identification :* Size of the Pigeon. A striking Oxford-and-Cambridge-blue bird with biggish head, heavy bill, rufous-brown breast and blue abdomen and undertail. Singly, perched on telegraph wires or in some other exposed situation such as a fencepost or a tree-stump, in open fallow land and cultivation. Laboured flight with deliberate wing beats.

Specimens : *B.N.H.S.* : ♂ 21-2-21 Santa Cruz (B. C. Ellison); *St. X. C.* : 168 ♂ 19-11-33 An dhēri (H.A.).

Noted : *City* : Churchgate Reclamation. *Salsette* : Matūnga, Kūrla, Chembūr Trombay, Mulund, Borivli, etc.

Resident? Not common. Its food consists of grasshoppers, crickets and other insects usually captured on the ground. When an insect is sighted the bird flies down to it and returns to the same perch or another one nearby, where the victim is battered and swallowed. It has a variety of loud raucous calls and is particularly noisy and demonstrative in the breeding season when the male also indulges in some fantastic aerobatics.

We have no information regarding its breeding in Salsette, but we have once observed the above nuptial display (Borivli) in March which suggests the probability.

According to Aitken (*J.B.N.H.S.*, xiii, 398) the European Roller (*Coracias garrula* ssp.), distinguished from our bird in having the underparts pale blue throughout, has occurred in or near Bombay. H.A. observed this bird at Khandāla in the Western Ghāts on 25-3-34, and obtained two specimens of the Kashmir race (*C. g. semenowi*) in October-November 1935.







The Common Indian Bee-eater ( *Merops orientalis orientalis*, Latham ).

Photos by



The White-breasted Kingfisher [ *Halcyon smyrnensis smyrnensis* ( Linn. ) ].

Sdlim Ali.

[**The Common Indian Bee-eater** : *Merops orientalis orientalis* Latham.

Mahrāṭṭī name : *Patēri*.

*Field identification* : Size about that of the House-Sparrow. A bright green bird tinged with reddish-brown on the head and neck. Two pointed feathers sticking out beyond the tail. A narrow black gorget on foreneck. Slender, long, slightly curved bill. Parties, in gardens, open country and near the seashore. Perching on telegraph wires, fence-posts, etc., making graceful sallies and swoops after winged insects, capturing them in mid-air and circling round on motionless wings back to the perch. Often dust-bathing on country roads.

Specimens : *B.N.H.S.* : ♂ 29-12-23 An dhēri (S. H. Prater); *St. X. C.* : 41 ♀ 6-8-33 Marōl (H.A.).

Noted : *City* : Malabār and Cumbāla Hills, Wālkēshwar, Mahāluxmi, Victoria Gardens—Byculla, etc. *Salsette* : Pāli Hill, Khār, Jūhū, Versōva, Chembūr Trombay, Borivli, Kandivli, Gōdhubunder, Thāna and elsewhere generally.

Resident and local migrant. Though very common during the dry months, the great majority of Bee-eaters disappear from Bombay and Salsette about the middle of April. During the rainy season, i.e. up to about the end of August, they are only rarely seen.

The birds roost at night in leafy trees into which they begin to collect about sunset. Great noise and bustle prevails, the gathering suddenly flying out in a rabble every now and again and returning after circling about in disorder above the tree. They are late risers, and parties may be seen sleeping huddled together on a branch well after the sun is up.

*Breeding* : We have no record of nests in Bombay or Salsette, but the birds breed freely at and in the neighbourhood of Alibāg across the harbour. The nest is at the end of a curved tunnel in sandy soil or soft earth. The burrow is either driven horizontally into a bank or cutting or sunk obliquely into more or less level ground. It is usually from 1 to 3 feet deep and about 1½ inches in diameter. Four to six roundish white eggs form the normal clutch. They seem to be laid at longer intervals than 24 hours each, and incubation commences—or perhaps the heat in the tunnel suffices for the purpose?—from the first egg. This is evident from the great disparity between the growth of the oldest and youngest chick in a nest.]

[**The Blue-tailed Bee-eater** : *Merops superciliosus javanicus* Horsf.

*Field identification* : Somewhat larger than the Common Bee-eater—about the size of the Bulbul—but generally similar to it in appearance. Bright bluish-green with a greenish-blue tail including the pin feathers. A black stripe through the eye.

Specimen : *B.N.H.S.* : ♂? 19-9-26 Kandivli (S.A.).

Noted : *Salsette* : Santa Cruz, Sāki, An dhēri, Borivli, Thāna. *Mainland* : Kihim, Kolāba District (specimen ♂ 17-10-26).

A passage migrant (to the south?) in September-October. All our records are during these 2 months only. Once (28 April) a bird was heard passing over at Santa Cruz, probably on return passage, but it is evident that for this they follow some other route and the majority at least avoid Salsette. These bee-eaters keep to open country and we have frequently observed parties on the sandy seashore. Its notes are like the Common Bee-eater's, but deeper and readily distinguishable from them.]

[**The Blue-cheeked Bee-eater** : *Merops superciliosus persicus* Pallas.

This race presumably also passes over Salsette in October. We have no specimen from actually within our limits, but a male obtained by H.A. at Bassein (Thāna District) on 13 October ('33) belongs to it. On that date he found the birds to be very abundant there, all perching more or less exclusively on the telegraph wires whence they launched sallies after winged insects. This subspecies differs from *javanicus* chiefly in having the rump and tail more green less blue, and in possessing more conspicuous blue-green cheeks.]

**The Pied Kingfisher** : *Ceryle rudis leucomelanura* Reichenbach.

*Field identification* : Size about that of the Myna. A speckled and barred black and white bird with a stout, dagger-shaped bill. Singly or pairs, by streams and tanks, hovering ('standing on its tail') in mid-air and dropping like a bolt upon fishes near the surface.